

High Crosstalk Attenuation Voice and Data Telecom Transformers

▲ Safety Agency

- Meets United States (F.C.C.) and Canadian (D.O.C.) requirements.
- UL component recognized

▲ Specifications

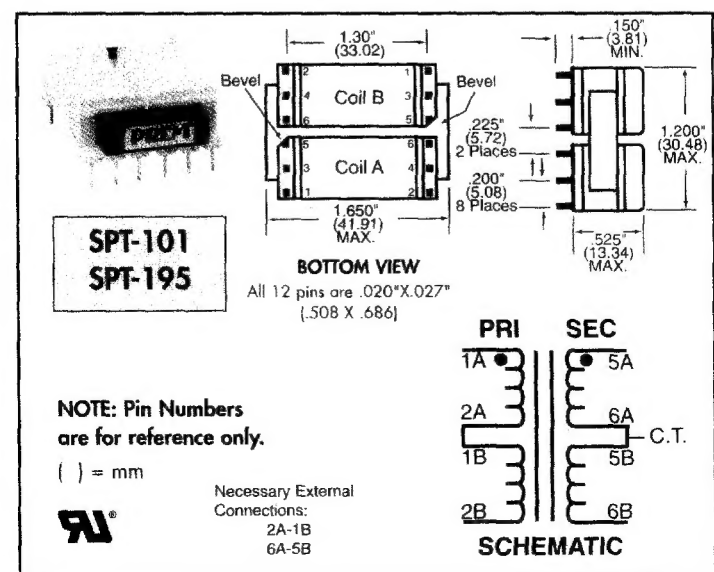
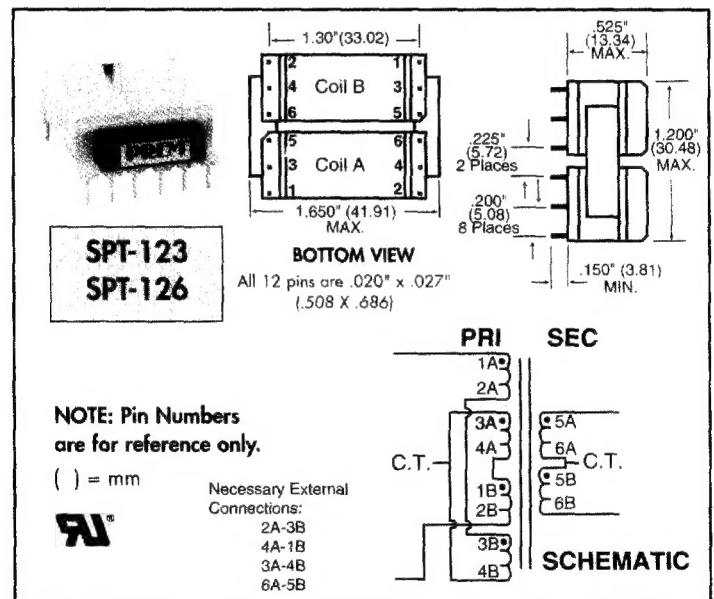
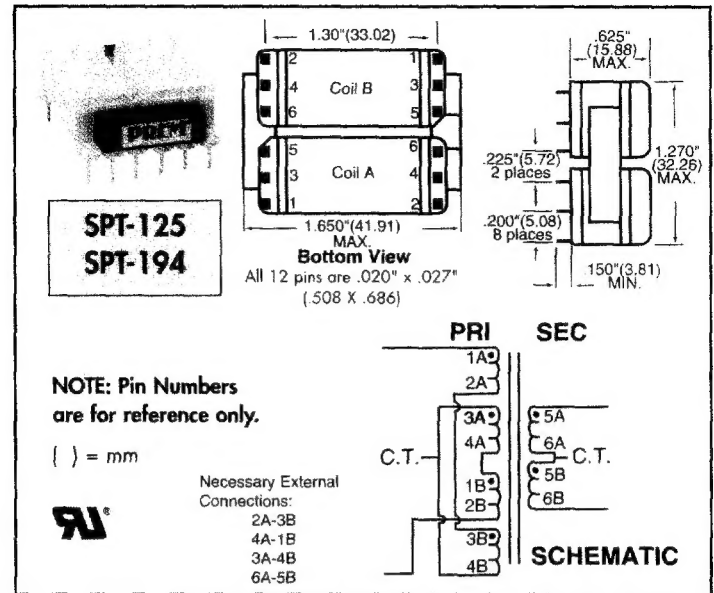
- High Crosstalk attenuation
- Low Profile
- Impedance ratios of 600Ω: 600Ω
- Hipot - 1500 VRMS
- Ideal for multiple rack applications

Notes: 1. All units are symmetrical and can be rotated 180° without changing the pin-out or electrical performance.
2. Longitudinal balance connections for SPT-101 and SPT-195: (1A-2B) with 2A-1B and 6A-5B tied and floating, 600 Ω load with any secondary terminal grounded.

PART	SPT-101	SPT-123	SPT-125	SPT-126	SPT-194	SPT-195
IMPEDANCE (Ω)	PRI	600	600	600	600	600
	SEC	600	600	600	600	600
TURNS RATIO ± 2%	1:1	1:1	1:1	1:1	1:1	1:1
MAXIMUM DC UNBALANCE	90mA	90mA	90mA	80mA	90mA	80mA
INS. LOSS REF @ 1KHz	1.80dB	1.85dB	1.35dB	2.00dB	1.40dB	2.10dB
RETURN LOSS MIN. @ 300Hz	11.0dB	12.0dB	13.0dB	11.5dB	12.0dB	11.0dB
T.H.D. @ 0dBm 300Hz (TYP.)	-65dB	-65dB	-65dB	-53dB	-53dB	-53dB
RESISTANCE ± 10%	PRI	95Ω	95Ω	80Ω	95Ω	80Ω
	SEC	180Ω	180Ω	100Ω	180Ω	100Ω
FREQ. RESPONSE @ 300-3.5KHz	±0.5dB	±0.5dB	±0.5dB	±0.5dB	±0.5dB	±0.5dB
DIELECTRIC STRENGTH PRI-SEC-CORE	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC
LONGITUDINAL BAL. MEETS FCC PART 68.310 (a)	Yes Note #2	Yes	Yes	Yes	Yes	Yes Note #2
ALTERNATE PART	SPT-195	SPT-126	SPT-194	SPT-123	SPT-125	SPT-101

Transformers in blue shading are economy versions.
All tests performed with 600Ω load on secondary with DC on primary.

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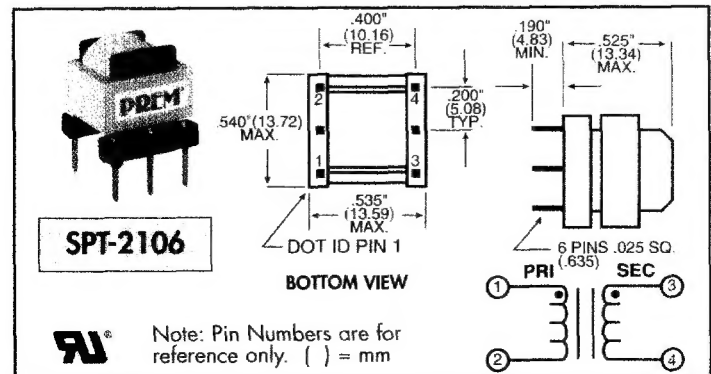
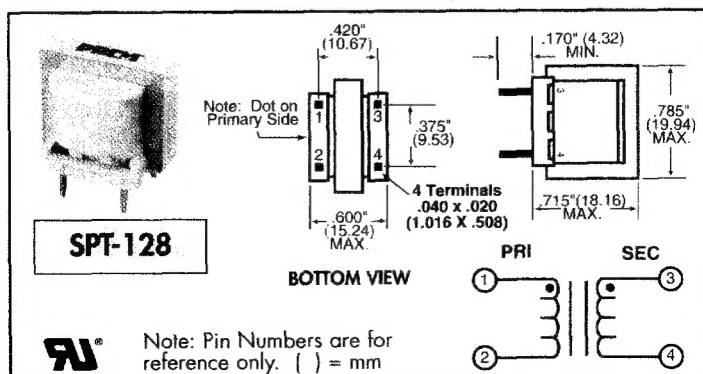
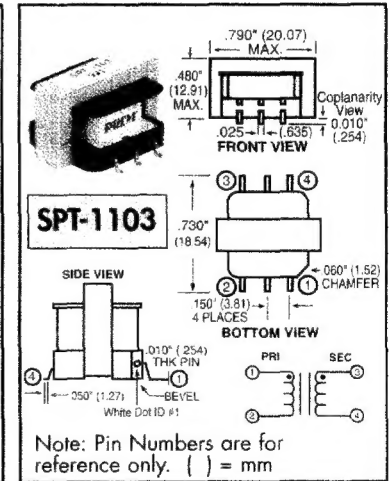
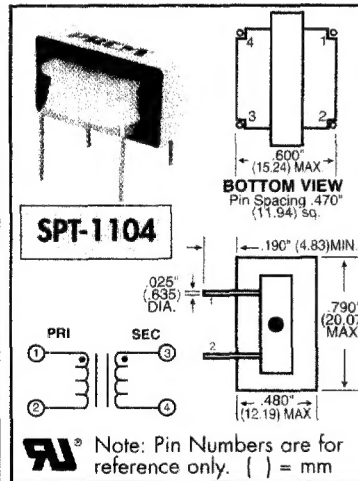
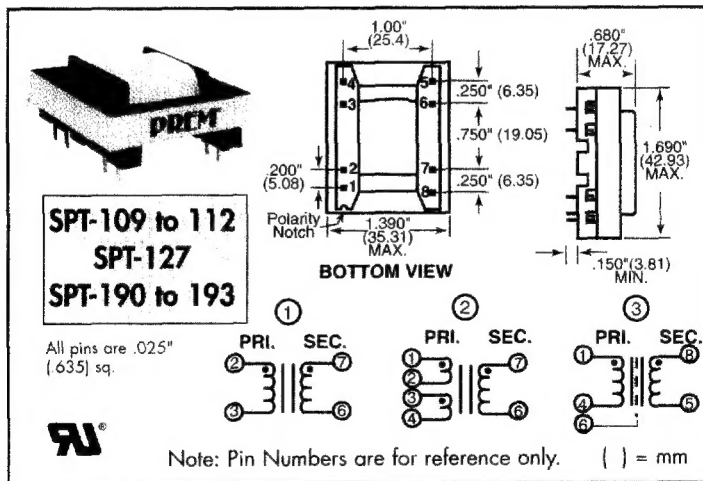
Telephony-Voice and Data

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PREM		SPT-109	SPT-110	SPT-111	SPT-112	SPT-127	SPT-128	SPT-190	SPT-191	SPT-192	SPT-193	SPT-1103†	SPT-1104†	SPT-2106
IMPEDANCE (Ω)	PRIMARY	600	600	900	900	600	600	600	600	900	900	600	600	600
	SECONDARY	600	600	600	600	600	600	600	600	600	600	600	600	600
TURNS RATIO $\pm 2\%$		1:1	1:1.127	1:1.8168	1:1.942	1:1	1:1	1:1	1:1.127	1:1.8168	1:1.942	1:1.028	1:1.028	1:1.0523
MAXIMUM DC UNBALANCE		80mA	80mA	80mA	80mA	120mA	0mA	80mA	80mA	80mA	80mA	0mA	0mA	0mA
INS. LOSS REF @ 1KHz		1.15dB	1.15dB	1.55dB	1.20dB	1.30dB	1.00dB	1.20dB	1.30dB	1.60dB	1.30dB	1.00dB	1.00dB	1.25dB
RETURN LOSS MIN. @ 300Hz		11.5dB	14.5dB	11.0dB	12.5dB	11.0dB	14.5dB	11.0dB	12.5dB	10.5dB	11.0dB	23.0dB	23.0dB	21.0dB
T.H.D. @ 0dBm 300Hz (TYP.)		-65dB	-65dB	-65dB	-65dB	-65dB	-55dB	-53dB	-53dB	-53dB	-53dB	-59dB	-59dB	-59dB
RESISTANCE $\pm 10\%$	PRIMARY	60 Ω	67 Ω	76 Ω	83 Ω	62 Ω	35 Ω	60 Ω	67 Ω	76 Ω	83 Ω	39 Ω	39 Ω	49 Ω
	SECONDARY	72 Ω	75.5 Ω	92 Ω	126 Ω	100 Ω	35 Ω	72 Ω	75.5 Ω	92 Ω	126 Ω	50 Ω	50 Ω	65 Ω
FREQUENCY RESPONSE 300-3.5KHz		± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.25 dB
DIELECTRIC STRENGTH PRI-SEC-CORE		1500 VAC	1500 VAC	1500 VAC	1500 VAC	2400 VDC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC
LONGITUDINAL BALANCE MEETS FCC PART 68.310 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
REFER TO SCHEMATIC NUMBER		1	2	1	2	3	•	1	2	1	2	•	•	•
ECHO RETURN LOSS MINIMUM		•	•	•	•	•	20.5dB	•	•	•	•	26.0dB	26.0dB	25.0dB
ALTERNATE PART		SPT-190	SPT-191	SPT-192	SPT-193	•	•	SPT-109	SPT-110	SPT-111	SPT-112	•	•	•

† impedance matching: $\pm 10\%$ over entire frequency range

All tests performed with 600 Ω on secondary with DC on primary
Transformers in shading are economy versions.



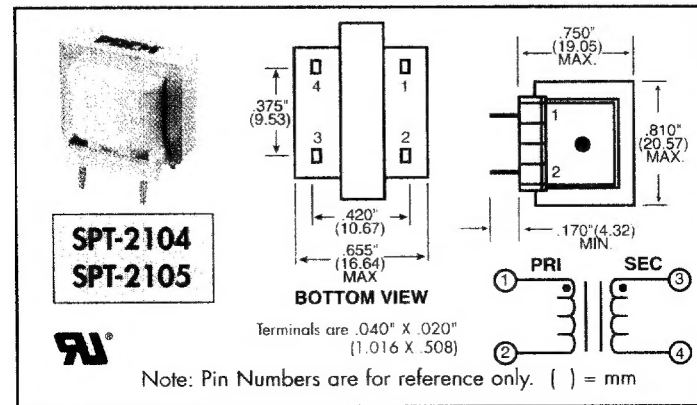
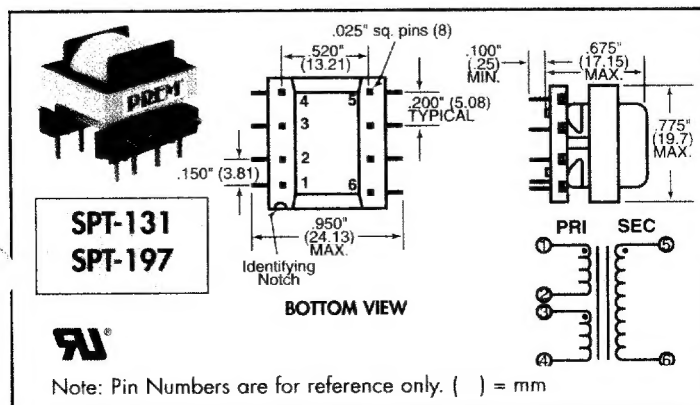
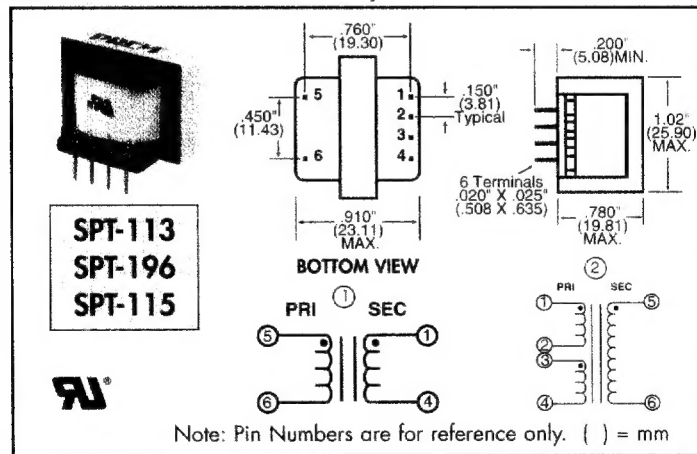
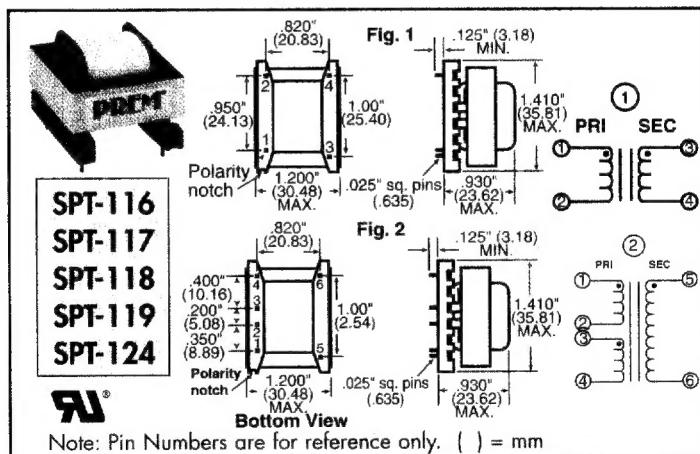
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PART		SPT-113	SPT-115	SPT-116	SPT-117	SPT-118	SPT-119	SPT-124	SPT-131	SPT-196	SPT-197	SPT-2104†	SPT-2105
IMPEDANCE (Ω)	PRIMARY	600	600	600	600	900	900	600	600	600	600	600	600
	SECONDARY	600	600	600	600	600	600	600	600	600	600	600	600
TURNS RATIO ± 2%		1:1	1:1	1:1	1:1.125	1:1.8163	1:1.946	1:1	1:1	1:1	1:1	1:1.037	1:1
MAXIMUM DC UNBALANCE		50mA	60mA	80mA	80mA	80mA	80mA	80mA	0mA	50mA	0mA	0mA	80mA
INS. LOSS REF @ 1KHz		1.25dB	1.30dB	1.20dB	1.25dB	1.50dB	1.55dB	1.20dB	1.00dB	1.30dB	1.15dB	.90dB	2.30dB
RETURN LOSS MINIMUM @ 300Hz		12.5dB**	10.5dB	13.0dB	16.0dB	9.5dB	12.0dB	13.0dB	18.0dB	11.0dB***	12.5dB	23.0dB	6.0dB
T.H.D. @ 0dBm 300Hz (TYP.)		-59dB	-53dB	-53dB	-59dB	-53dB	-53dB	-53dB	-57dB	-53dB	-53dB	-59dB	-55dB
RESISTANCE ± 10%	PRIMARY	75Ω	63Ω	66.2Ω	76Ω	82.8Ω	90Ω	66Ω	24.5Ω	75Ω	24.5Ω	36Ω	180Ω
	SECONDARY	76Ω	88Ω	82.2Ω	86Ω	85.4Ω	110Ω	82Ω	31Ω	76Ω	31Ω	50Ω	75Ω
FREQUENCY RESPONSE @ 300-3.5KHz		±0.5dB	±0.5dB	±0.5dB	±0.5dB	±0.5dB	±0.5dB	±0.5dB	±0.5dB	±0.5dB	±0.55dB	±0.5dB	*
DIELECTRIC STRENGTH Vrms PRI-SEC-CORE		1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC	1500 VAC
LONGITUDINAL BALANCE MEETS FCC PART 68.310 (a)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
REFER TO FIGURE NUMBER		•	•	1	2	1	2	2	•	•	•	•	•
REFER TO SCHEMATIC #		2	1	1	2	1	2	2	•	2	•	•	•
ECHO RETURN LOSS MIN.		•	•	•	•	•	•	•	•	•	•	26.0dB	9.0dB
ALTERNATE PART		SPT-196	•	•	•	•	•	•	SPT-197	SPT-113	SPT-131	•	•

All tests performed with 600Ω on secondary with DC on primary
Transformers in shading are economy versions.

* 300-600Hz ± 3.0dB, 600Hz - 3.5KHz ± 1.0dB; † impedance matching: ±10% over entire frequency range; ** Return loss measured with 422Ω on secondary
*** Return loss measured with 460Ω on secondary.



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		SPT-172	SPT-184	SPT-185	SPT-186	SPT-187	SPT-188	SPT-189	SPT-198	SPT-199	SPT-1105	SPT-1106	SPT-1107
IMPEDANCE (Ω)	PRIMARY	600	600	600	600	600	600	600	600	600	600	600	600
	SECONDARY	600	600	600	600	600	600	600	600	600	600	600	600
TURNS RATIO $\pm 2\%$		1:1	1:1	1:1.1036	1:1	1:1.08	1:1	1:1	1:1	1:1.1036	1:1.045	1:1	1:1.08
MAXIMUM DC UNBALANCE		50mA	120mA	120mA	70mA	70mA	70mA	60mA	120mA	120mA	80mA	70mA	70mA
INS. LOSS REF @ 1KHz		1.50dB	1.30dB	1.30dB	1.20dB	1.20dB	1.30dB	2.00dB	1.50dB	1.50dB	1.30dB	1.30dB	1.30dB
RETURN LOSS MIN. @ 300Hz		11.5dB	10.0dB	11.0dB	10.0dB	11.0dB	12.0dB	12.0dB	9.0dB	10.0dB	9.5dB	8.5dB	10.0dB
ECHO RETURN LOSS MINIMUM		16.5dB	15.0dB	18.0dB	16.5dB	19.0dB	16.0dB	16.5dB	12.5dB	14.5dB	17.0dB	15.0dB	18.0dB
T.H.D. @ 0dBm 300Hz (TYP.)		-50dB	-55dB	-55dB	-53dB	-65dB	-59dB	-53dB	-53dB	-53dB	-50dB	-53dB	-53dB
RESISTANCE $\pm 10\%$	PRIMARY	73 Ω	63.5 Ω	57.5 Ω	66 Ω	66 Ω	70 Ω	75 Ω	63.5 Ω	57.5 Ω	62.4 Ω	66 Ω	66 Ω
	SECONDARY	103 Ω	99 Ω	99 Ω	66 Ω	72 Ω	81 Ω	80 Ω	99 Ω	99 Ω	60.1 Ω	66 Ω	72 Ω
FREQUENCY RESPONSE @ 300-3.5KHz		± 0.5 dB	± 0.5 dB	± 0.5 dB	± 0.6 dB	± 0.5 dB	± 0.5 dB	± 0.5 dB	± 1.0 dB	± 1.0 dB	± 1.0 dB	± 1.0 dB	± 1.0 dB
DIELECTRIC STRENGTH PRI-SEC-CORE		1500 VAC	2200VDC	2200VDC	2200VDC	2200VDC	1500VAC	1500VAC	2200VDC	2200VDC	1500VAC	2200VDC	2200VDC
INSULATION RESISTANCE @ 500 V.D.C.		•	>100M Ω	>100M Ω	>100M Ω	>100M Ω	•	•	>100M Ω	>100M Ω	•	>100M Ω	>100M Ω
LONGITUDINAL BALANCE MEETS FCC PART 68.310 (a)		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
REFER TO SCHEMATIC NUMBER		•	•	•	1	1	2	3	•	•	2	1	1
ALTERNATE PART		•	SPT-198	SPT-199	SPT-1106	SPT-1107	•	•	SPT-184	SPT-185	•	SPT-186	SPT-187

Transformers in blue shading are economy versions.

All tests performed with 600 Ω on secondary with DC on primary

Notes: 1. Static shield screens constructed with solid copper foil.

Ends overlap > .197" (5.0)

2. Pin numbers are for reference only.

Very Low Profile Coupling Transformers

